



NOTES CALICVIRUSES

MICROBE OVERVIEW

Genetic material

- Single-stranded RNA viruses

Taxonomy

- Genera: *Norovirus*, *Sapovirus*, *Lagovirus*, *Nebovirus*, *Vesivirus*

Morphology

- Small, icosahedral, non-enveloped

Transmission

- Ingestion → small intestine → villi infection
→ malabsorption → osmotic diarrhea

NOROVIRUS

osms.it/norovirus

PATHOLOGY & CAUSES

- Virus known as **viral gastroenteritis** agent
 - AKA Norwalk virus
- Classified into seven genogroups
 - I, II, IV → cause human disease

Transmission

- Fecal-oral
 - **Infected individual:** virus in stool < four weeks
 - **Immunocompetent individual:** peak concentration 2–5 days post-infection
- Direct person-to-person
- Contaminated food, water, fomite
 - Contaminated water in leafy vegetables, oysters, raspberries
 - Prepared food → contaminated at point of service (e.g. salads, sandwiches)
- Droplet spread from vomitus

Pathogenesis

- Ingestion → small intestine villi infection → disruption of epithelium, anion transport system → malabsorption of D-xylose, fat → osmotic diarrhea

Small intestine histopathology

- Villous shortening, epithelial vacuolization, crypt hypertrophy, microvilli brush border loss, intercellular space widening, lymphocytic proliferation of lamina propria

RISK FACTORS

- Blood group antigens
 - Viral binding preference for A, B antigens genogroup-determinant
- Close-quarter residence (e.g. nursing homes, cruise ships)

COMPLICATIONS

- Severe dehydration, malnutrition, persistent disease (immunosuppressed individuals)

SIGNS & SYMPTOMS

- 12–48 hour incubation period
- Acute onset vomiting
 - Nonbloody, nonbilious
- **Watery diarrhea**
 - Nonbloody
- Fever, abdominal pain, myalgia, malaise

VISIT...

LANZAROTE
Caliente.COM

DIAGNOSIS

- History
 - Pathogen contact, contaminated food source

LAB RESULTS

- Reverse transcriptase polymerase chain reaction (RT-PCR)
 - Stool

TREATMENT

- No cure

MEDICATIONS

- Antimotility agents
- Antiemetics
 - Reserved for individuals unable to take oral hydration

OTHER INTERVENTIONS

- Fluid maintenance, repletion
 - From oral intake → IV fluids
- Electrolyte balance

Prevention

- Hand hygiene
- Environmental fecal contact decontamination
- Limited pathogen contact